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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/766,241	01/19/2001	Tim Murphy	07452-047001	8858
20306	7590	11/30/2004	EXAMINER	
MCDONNELL BOEHNEN HULBERT & BERGHOFF LLP 300 S. WACKER DRIVE 32ND FLOOR CHICAGO, IL 60606			PHU, PHUONG M	
			ART UNIT	PAPER NUMBER
			2631	

DATE MAILED: 11/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/766,241	MURPHY ET AL.	
	Examiner	Art Unit	
	Phuong Phu	2631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 07 September 2004.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-8,10-15 and 18-20 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) 1-8 and 10-13 is/are allowed.

6) Claim(s) 14,15,19 and 20 is/are rejected.

7) Claim(s) 18 is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

- Certified copies of the priority documents have been received.
- Certified copies of the priority documents have been received in Application No. _____.
- Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5) Notice of Informal Patent Application (PTO-152)

6) Other: _____.

DETAILED ACTION

1. This Office Action is responsive to the Amendment filed on 9/7/04.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 14, 15, 19 and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Sands et al (6,134,283), previously cited.

As per claim 14, see figures 2-11, and col. 9, line 28 to col. 17, line 40, Sands et al discloses a system (see figures 2 and 11) having a plurality of modems (204, 214, 218) using a plurality of superframes, each of superframe having a plurality of frames “symbols”, each frame having a plurality of tones “vectors” (see col. 11, lines 49-51), each vector being represented by its spectrum energy, wherein the method/system comprises:

synchronizer means (1114, 1118) (see figure 11) which identifies the position of a synchronization symbol, “burst edge” frame, indicating the position of the superframe boundary (see “burst edge” frames (6) and (15) of figures 9A, 9B, 10A and 10B, and col. 13, lines 25-35), wherein the synchronizer means aligns the symbols of each modem based on the position of the synchronization symbol (see col. 16, lines 28-40); and wherein the synchronizer means compares a summed energy of each symbol time period of the plurality of superframes (see figures 9A, 9B, 10A, 10B) to determine the position of a synchronization symbol of the superframes in such a way that the synchronizer means compares the summed energy of each frame “symbol” of the plurality of superframes and uses the result of the comparison (see figures 9B, 10B) to determine the position of a synchronization symbol of the superframes (see col. 13, lines 25-35 and col. 14, lines 40-56). Note that the summed energy of each frame “symbol” of the plurality of superframes can be considered here as a summed energy vector having one component in one dimension, which is its own value, and its value being equal to sum of energy of the plurality of tones in each frame (see col. 13, lines 12-25).

As per claim 15, Sands et al discloses that the plurality of modems are subscriber-lines modems (see figure 2).

As per claim 19, Sands et al discloses that said plurality of modems communicate using DMT symbols (see col. 11, lines 49-51).

As per claim 20, Sands et al discloses that modem (204) of the plurality of modems communicates with a central office (202) (see figure 2).

Allowable Subject Matter

4. Claims 1-8 and 10-13 are allowed.

5. Claim 18 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

6. Applicant's arguments filed on 9/07/04 have been fully considered but they are not, in part, persuasive.

-Claims 10-13 are now indicated allowable since the claims were amended to overcome the objection.

-Regarding to the applicant's arguments with respect to the rejection to claims 14, 15, 19 and 20, as being anticipated by Sands et al, are not persuasive. The applicant mainly argues that, in claim 14, Sands et al does not disclose the limitation "the synchronizer compares a summed data vector of each symbol time period of the plurality of superframes to determined the position of a synchronization symbol of the superframes".

The examiner respectfully disagrees. Note that the rejection is based on the limitation given in the claim. As explained above in the *Claim Rejections - 35 USC § 102*, Sands et al teach synchronizer means (1114, 1118) wherein the synchronizer means compares a summed energy of each symbol time period of the plurality of superframes (see figures 9A, 9B, 10A, 10B) to determine the position of a synchronization symbol of the superframes in such a way that the synchronizer means compares the summed energy of each frame "symbol" of the plurality of superframes and uses the result of the comparison (see figures 9B, 10B) to determine the position of a synchronization symbol of the superframes (see col. 13, lines 25-35 and col. 14, lines 40-56). Note that the summed energy of each frame "symbol" of the plurality of

superframes can be considered here as a summed energy vector (equivalent with the limitation “a summed data vector”), the summed energy vector having one component in one dimension, which is its own value, and its value being equal to sum of energy of the plurality of tones in each frame (see col. 13, lines 12-25) wherein the plurality of tones can be considered as “vectors” (see col. 11, lines 49-51), each vector being represented by its spectrum energy. Further claim 14 does not have other limitations to make the “summed data vector” distinguishable from Sands et al summed energy vector.

-Claim 18 is indicated allowable but still objected as being depended on the rejected claim 14.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuong Phu whose telephone number is 571-272-3009. The examiner can normally be reached on M-F (6:30-2:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on 571-272-3021. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Phuong Phu
Primary Examiner
Art Unit 2631

Phuong Phu
Phuong Phu
11/18/04

PHUONG PHU
PRIMARY EXAMINER